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State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

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Salt Lake City, Utah 84114-4870

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MINERALS PROGRAM
FILE COPY

January 24, 1992

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DIVISION OF
OIL GAS & MINING

Mr. Rex Rowley, Area Manager
U.S. Bureau of Land Management
House Range Resource Area
15 East 500 North
P.O. Box 778
Fillmore, UT 84631

RE: Comments to Jumbo Mining by BLM
Letter Dated December 24, 1991

Dear Mr. Rowley:

We sent comments to Jumbo Mining Company, regarding their proposed new heap, on August 14, 1991. A copy of that letter, the draft ground water permit, and a letter concerning the process ponds are enclosed for your files. You will receive copies of all our future correspondence with Jumbo Mining Company.

Based on the review of your letter on the matter, we offer the following comments:

1. Item 2(a).
The statement that the proposed primary liner is adequate does not comply with our current policy of requiring a 60-mil thick geomembrane for the top liner.
2. Item 5(a).
It is our understanding that the 0.22 mg/l WAD cyanide level listed in the draft BLM Cyanide Management Plan has since been revised to 0.20 mg/l.

Our ground water quality protection rule requires the pH of rinsate to be between 6.5 to 8.5.

3. Item 5(b,c).
Since the proposed operation will not produce tailings, these requirements are not applicable and should be deleted.

Mr. Rex Rowley, Area Manager

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4. Item 6.

During the early review of Jumbo Mining's state ground water discharge permit application, it was determined that the main aquifer under the site is located at great depth, approximately 1400 feet. The vadose zone consists of fractured quartzites, shales and carbonates and it would be very difficult to predict migration pathways of leaking process fluids. Monitor wells would be very expensive to install and may not detect leakage from the pads. At best, they would only detect leakage after a significant quantity had already been released. For these reasons it was decided to waive ground water monitoring requirements for the state ground water discharge permit in favor of source monitoring by a leak detection system under the pad. The ground water discharge permit will only be issued after approval of the design of the pads and leak detection system and issuance of a construction permit by the Division of Water Quality.

Information contained in Jumbo Mining's ground water discharge permit application disclosed the existence of a small perched body of ground water under the leach pad site. Additional information requested from Jumbo Mining showed that this perched aquifer was extensively contaminated with cyanide and metals, most likely from heap leaching operations previously conducted at the site. Because of this contamination and uncertainty over the source, extent and flow directions of water in this aquifer, it was determined that the aquifer could not be used for compliance monitoring for the ground water discharge permit.

In a separate action, Jumbo Mining was required to de-water a contaminated aquifer to prevent it from discharging to the deeper regional aquifer. Jumbo Mining will intercept this water in a trench, and may use it for their permitted leach operations. The quality of this produced water will be monitored monthly.

Sincerely,



Kiran L. Bhayani, P.E., D.E.E., Manager
Design Evaluation Section

KLB:MN:rvg

cc: Mr. Terry McParland, BLM, SLC Office
Mr. Wayne Hedberg, DOGM

N:BLMIMC2.CMT

FILE:JUMBO MINING CO. INDUSTRIAL WW